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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Paper No. 15

Serial Number: 07/297,333  
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Appellant(s): RICHARD R. HERTZOG ET AL.

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BOARD OF PATENT APPEALS  
AND INTERFERENCES

WILLIAM H. THROWER  
For Appellant  
**91-0763**  
EXAMINER'S ANSWER

MAILED  
OCT 18 1990  
GROUP 120

This is in response to appellant's brief on appeal filed  
July 23, 1990.

(1) *Status of claims.*

The statement of the status of claims contained in the brief  
is correct.

(2) *Status of Amendments After Final.*

The appellant's statement of the status of amendments after  
final rejection contained in the brief is correct.

(3) *Summary of invention.*

The summary of invention contained in the brief is correct.

(4) *Issues.*

The appellant's statement of the issues in the brief is  
correct.

(5) *Grouping of claims.*

Art Unit 126

Appellant's brief includes a statement that claims 1, 3 and 5 do not stand or fall together and provides reasons as set forth in 37 C.F.R. § 1.192(c)(5) and (c)(6).

(6) *Claims appealed.*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(7) *Prior Art of record.*

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

<del>4,358,618</del>	Sifniad <del>s</del> et al.	9/82
<del>4,207,264</del>	Anderson et al.	6/80
<del>4,202,687</del>	Barilli et al.	3/69

(8) *New prior art.*

No new prior art has been applied in this examiner's answer.

(9) *Grounds of rejection.*

The following ground(s) of rejection are applicable to the appealed claims.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102

of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1 to 8 are rejected under 35 U.S.C. § 103 as being unpatentable over Sifniades et al. in combination with Barilli et al and Anderson et al. Sifniades et al. teaches a three stage process for decomposing the instant cumene oxidation product mixture. The first and third stages of this process are essentially the same as the instant two stages with the second stage of Sifniades et al varying from the first stage only by using plug flow conditions instead of back mixing. The essential difference between the instant process and that of Sifniades et al is in the use of acetone as a solvent for the feed which consist of a cumene oxidation product mixture. No solvent is used by Sifniades et al. Anderson et al and Barilli et al teach the acid catalyzed decomposition of cumene hydroperoxide at elevated temperatures. Anderson teaches that the hydroperoxide is most conveniently added "with an organic solvent such as the carbonyl product of the cleavage reaction", column 7. Barilli et al teaches that the presence of acetone reduces the formation of undesirable side products, column 2. It would be obvious to one skilled in the art to use acetone as a solvent for the cumene oxidation mixture in the process of Sifniades et al. to increase the yield and purity of the product. Barilli et al also teaches

the fractional distillation of the product to isolate acetone. The recycling of this product is considered to be an obvious economic expedient.

*(11) Response to argument.*

Appellants arguments concerning improved results and more controlled decomposition of the CHP are not considered persuasive. Sifniades et al uses similar overlapping parameters for the CHP concentration in the initial stage to control the reaction and optimize the yield. The overall yields for each of the processes are essentially the same especially since it is known that variations within the claimed range can be made to increase the production of a desired product. The data presented in the specification is not an adequate comparison since there is no true side-by-side comparison made with the prior art. The removal of the acetone by distillation is not considered a patentable feature since Barilli et al. teaches the removal of acetone by distillation.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

*James H. Reamer*

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GROUP 120 - ART UNIT 126

Reamer:st  
October 17, 1990

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